

THE LARVA AND PUPA OF *LYCOREA PIETERI* LAMAS (DANAIDAE)

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ABSTRACT. The larva and pupa of the danaid *Lycorea pietri* Lamas is described and figured for the first time. It differs most markedly from the larvae of other danuids in having only a pair of tentacles in front and none in the rear. The food plant is *Carica papaya* (Cariaceae).

During the last quarter of the 18th Century there was a gifted architect in northern Haiti who was also a naturalist 200 years ahead of his time. His work is unknown to biologists even though he painted from life accurately hundreds of Haitian animals and plants. Most of his subjects did not become known to binomial taxonomy until two generations later. He is unpublished, except that apparently Deshayes pirated some of his work and sent it to Buffon (Wetherbee, in press). Not only did he paint some 50 Lepidoptera, but he reared them from larvae and depicted the early stages and named several of them from their food plants.

He was "M. de Rabié, marechal de camp, ingenieur en chef de la parties du nord de St. Domingue" and resided at Cap Haitian from at least as early as 1752 to about 1784 and died in Paris in 1785. His first insects were drawn in 1766. Folios of his work are now in the Blacker-Wood Library of McGill University. Through the courtesy of Miss Eleanor MacLean, McGill Librarian, I have been privileged to publish Rabié's zoological subjects (Wetherbee, 1985a).

Rabié reared *Lycorea pietri* Lamas (formerly called *L. ceres* Cramer, 1779) and depicted the larva, pupa, shed "robe" and imago. He called the larva "chenille de papayer (food plant: *Carica papaya* of the Caricaceae) and the adult "le noeud de ruban" (ribbon-bow). This is *L. pietri cleobaea* Godart, 1819, the type-specimen of which was collected, undoubtedly, by Antonio Gonzales of the covert Baudin voyage to Hispaniola in 1799.

Most of the larvae of Lepidoptera drawn by Rabié were those of moths, especially of Sphingidae (Wetherbee, 1985b). Only four other butterfly species of the 36 species illustrated by Rabié (Wetherbee, 1985a) show early stages: *Danaus plexippus*, *Colobura dirce*, *Siproeta stelenes* and *Dione vanillae*.

As can be seen from Fig. 1 (the black and white reproduction hardly does justice to the beauty of Rabié's colored painting), the larva (perhaps fourth instar) is danaid in character, but unlike *Danaus*, which has pairs of both anterior and posterior fleshy tentacles, and unlike

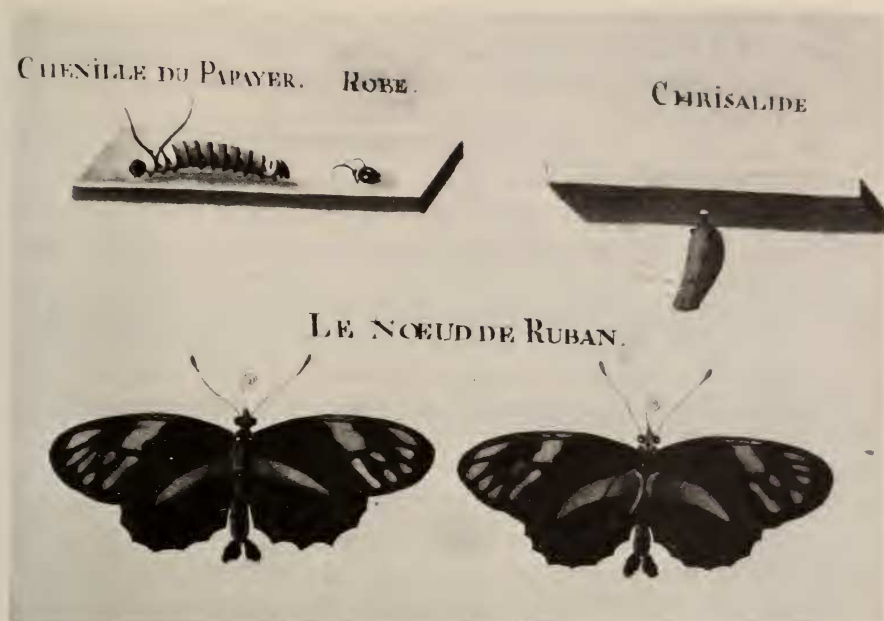


FIG. 1. *Lycorea pieteri* Lamas (*L. p. cleobaea* Godart, 1819) life history as painted by Rabié in Haiti in 1782.

Anetia which has none, *Lycorea pieteri* has only a pair of anterior tentacles. These are slightly longer than those of *Danaus plexippus*. The larva is smooth, about the same size as *D. plexippus*; both the head and posterior segment are black; the thoracic segments are white, followed by seven golden-yellow segments and then one white next to the last segment in front of the black tail-end. The narrow black bands, one at the anterior of each segment, have short, black, single, lateral, oblique, dash-like marks pointing backwards and downwards.

The hanging pupa is shown by Rabié in its lateral aspect only. It is similar in texture, size and shape to *D. plexippus* (but without the ridge) and is golden yellow with black bump-dots running in two arched lines on the sides, a few on the anterior parts, one prominent "occipital" bump-dot and two anal ones. The cremaster is black and contrasts sharply with the white web.

One must pause to consider that this excellent work was accomplished contemporary with Linnaeus' 12th edition of the *Systema Naturae* in a country which has had essentially no entomological research up to the present time. If we consider that Audubon was somewhat of a pioneer and hero, certainly Rabié was even a greater one.

Since viewing Rabié's pictures, I have had the good fortune in No-

member of finding many of the larvae of this species in Restauración, República Dominicana feeding on *Carica papaya*. The early stages are only slightly tinged with yellow. The fifth instar does not have the posterior segments white as shown by Rabié, but the thoracic segments tend to be whitish. The black tentacles are 15 mm in length, and the larva is about 40 mm. The ten narrow, black bands on the anterior of each segment send a spur toward each black spiracle and sometimes include it. The ultimate yellow segment has only three black dots representing the band. There are a pair of yellow eye-spots on the small black ultimate black segment. Both in Rabié's illustration and in life, it is easy to mistake the tail for the head in the resting caterpillar.

The pupa is always suspended from the midvein of the green lechosa leaf about midway along the length of the leaf. It is dull waxen-yellow. The black dots run in a mid-dorsal series, a dorso-lateral series, and there is an arc of elongated dots on the wing following the curvature of the wing and an isolated black dot in the middle of the wing. As shown by Rabié, there is a pair of black bumps on the body near the base of the cremaster.

LITERATURE CITED

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- 1985b. The sphinx-moths (Sphingidae) of Hispaniola and the 18th century moth paintings of Rabié. Published privately, Shelburne, Massachusetts. 69 pp.